PONY

سلسلة كتب الأستاذ

Programming and Artificial Intelligence

1st Secondary

First Term

By Eng. Osama Youssef

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Chapter 1

What Is Information?

Chapter Lessons:

Lesson 1 Information and Media

Lesson 2 Information Ethics

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Lesson 1 Information and Media

1 Data, Information, and Knowledge

1 Data:

- They are facts represented using:
  1. Numbers
  2. Characters
  3. Symbols

Examples: 35 – A - #FF000

2 Information:

- It is something that has a meaning or value for the recipient.
- It is used as a basis for decision-making.
- Unlike data, information has no form.

Examples	Data	Information
1	35	The temperature today in Cairo is **35°C**.
2	200	The price of the new phone is **200 $**.
3	120/80	The blood pressure of the patient is **120/80**.

Characteristics of Information

1. Persistence: Once created, information cannot be completely erased.

2. Reproducibility: Information can be copied easily in large quantities.

3. Propagation: Information spreads easily through mass media:
   1. Newspapers
   2. TV
   3. The Internet

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Types of Information

1. **Primary information:** It is the information obtained directly by yourself through:
   1. Personal experiences
   2. Research
   3. Surveys
   4. Experiments

2. **Secondary information:** It is the information not obtained directly by yourself, but through a third party.

EX

1. Books
2. newspapers
3. television, etc.

NOTES:

- Secondary information can sometimes differ from the original information or have interpretations added to it.
- In other words, it is necessary to compare the obtained information from multiple perspectives with other information to determine its degree of accuracy and reliability. This is called cross-checking.

3 Knowledge:

» It is information that has been analyzed and systematized to aid in problem-solving.

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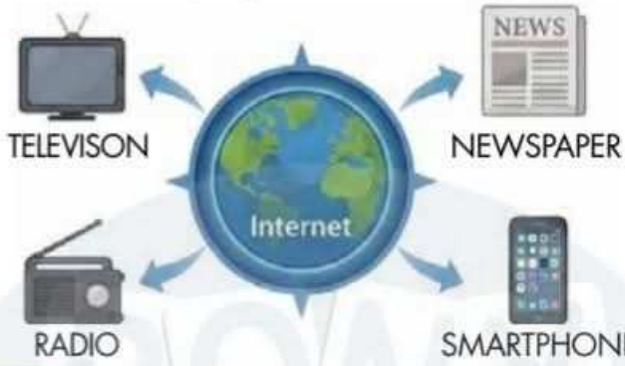
2 Media

1 Media:

» Media is used for conveying information to people.



Media Literacy

It's the ability to accurately interpret information obtained from media.

Types of Media

Media Name	Content	Examples
Expression Media	It's used as a means of expressing information.	① Text ② Images ③ Audio ④ Video
Propagation/ Transmission Media	It's used for the transmission and communication of information.	① Television ② Radio ③ Newspapers ④ Books ⑤ Telephone ⑥ The Internet
Recording Media	It's used for recording and storing information.	① Paper ② USB drives ③ DVDs ④ Cloud storage

أهم الكلمات والمصطلحات			
Persistence	الاستمرارية	Reproducibility	قابلية التكرار والنسخ
Propagation	الانتشار	Interpretations	تفسيرات
Third party	طرف ثالث	Conveying	نقـل
Cross-checking	التحقق المتبادل	Transmission media	وسائط النقل أو الإرسال
Expression media	وسائط الإعلام التعبيرية	Media literacy	الثقافة الإعلامية
Recording media	وسائط التسجيل	Perspectives	وجهات نظر

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2 Put (✓) or (✗):

1. 📖 Data are raw facts represented in the form of numbers, letters, or symbols. (القاهرة – شرق مدينة نصر 2026) (القاهرة – المقطم 2026) ( )
2. Information always has a form, just like an object. ( )
3. 📖 One of the characteristics of information is that it completely disappears after being published on the Internet. ( )
4. Primary information is obtained personal research or first-hand experience. (القاهرة – المعادى 2026) ( )
5. 📖 Secondary information is obtained from third party, such as books and research. (القليوبية 2026) (القاهرة – المعادى 2026) (الإسماعيلية 2026) ( )
6. Knowledge is information that has been analyzed and organized to solve problems. ( )
7. Information on website found on the Internet is always considered primary information. ( )
8. Secondary information always has the same meaning as the original information. ( )
9. 📖 Media literacy means the ability to interpret information accurately. ( )
10. Once information spreads online, it can always be completely deleted. ( )
11. 📖 Videos, pictures, and texts are examples of propagation media. (القاهرة الجديدة 2026) (الجيزة – العمرانية 2026) ( )
12. Books and newspapers are examples of secondary information. ( )
13. Cross-checking means comparing information from multiple sources to check accuracy. ( )
14. Disinformation is the ability to understand and interpret information from media. ( )
15. The Internet and radio are examples of recording media. (الإسماعيلية 2026) ( )

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Lesson 2 Information Ethics

1 Information Ethics

Information Ethics

- They are the foundational concepts and attitudes that guide appropriate behavior in the information society.
- This is regardless of the presence or absence of laws.

2 Points to consider when spreading information:

1 Characteristics of information on the Internet:

- Information spreads easily.
- Once published, it doesn't disappear easily.

2 Infringement of others' rights:

- Do not share copyrighted photos or videos without permission. ©
- You must not leak the personal information of others on the Internet.
- You must not infringe others' privacy.
- You must not post comments that slander or defame others or engage in online bullying.

3 Geotagging:

- It is location information (latitude and longitude) automatically store and videos taken using smartphones.

RISK

Sharing photos with geotages may rever your home, school. or exact location.

4 Disinformation and rumors:

- It is false information that is deliberately spread or baseless rumors.

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أهم الكلمات والمصطلحات			
Foundational concepts	المفاهيم الأساسية	Attitudes	التوجهات
Disseminated	منتشر - متداول	Leak	يسرب
Infringe privacy	انتهاك الخصوصية	Defame others	يشوه سمعة الآخرين
Slander others	التشهير بالآخرين	Geotagging	العلامة الجغرافية
Bullying	التنمر	Latitude	خطوط الطول
Disinformation	المعلومات المضللة	Longitude	دوائر العرض
Rumors	الشائعات	Deliberately	عمدًا
Internet addiction	إدمان الإنترنت	Interfering	التدخل
Excessively immersed	منغمس بشكل مفرط	Criminal activities	أنشطة إجرامية
Disclose	يكشف	Confidential	سري

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Lesson 2 Exercises

1 Choose the correct answer:

1. ..... is the foundational concept for appropriate activity in the information society.
   a. Media literacy
   b. Information ethics
   c. Information policy
   d. Cyber ethics

2. 📖 Which of the following is considered a violation of information ethics? (الأزهر الشريف 2026)
   a. Verifying sources
   b. Publishing copyrighted pictures without permission
   c. Respecting privacy
   d. Not using electronic passwords

3. Information on the Internet ..... .
   a. is always accurate and true
   b. spreads easily and is hard to erase
   c. disappears quickly
   d. never affects real people

4. Sharing another person's photo without permission violates ..... .
   a. antivirus
   b. storage
   c. copyright
   d. bandwidth

5. 📖 Which of the following is considered identity theft?
   a. Sharing a video
   b. Pretending to be someone else and stealing their account
   c. Using a phone while walking
   d. Spreading rumors

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14 If you find an account on Instagram using your name and photo profile without permission, this situation is called ..... .

a. cybercrime b. identity theft

c. Internet addiction d. disinformation

15 posting another person's private details online violates ..... .

a. database b. hardware

c. privacy d. browser

2 Put (✓) or (✗):

1 publishing copyrighted images without prior permission is considered an ethical violation. (الجيزة – 6 اكتوبر 2026) ( )

2 Geotags in photos and videos can reveal the user's location. ( )

3 Cybercrime is the misuse of computers and networks for criminal activities. ( )

4 📖 Respecting copyright and privacy is part of the information ethics. (الجيزة – الدقى 2026) ( )

5 It is acceptable to freely post defamatory comments on anonymous message boards. ( )

6 Internet addiction is when using the Internet interferes with study, work, or health. ( )

7 Disinformation refers to accurate information shared without permission. ( )

8 It is acceptable to leak the personal information of others on the Internet. ( )

9 📖 Internet addiction and using a phone while walking are among the problems related to smartphones. ( )

10 It is safe to upload pictures taken at home to the Internet without removing geotags. ( )

11 Online bullying is a form of inappropriate online behavior. ( )

12 It is ethical to share someone's personal stories online without their explicit approval. (الجيزة – الدقى 2026) ( )

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4 The information obtained through surveys conducted by the person themselves is called ..... .

a. secondary information b. primary information
c. processed data d. knowledge

5 The characteristic of information that allows it to remain and not disappear easily is called ..... .

a. reproducibility b. persistence
c. propagation d. none of them

2 Put (T) or (F):

1 The Internet and radio are examples of recording media. ( )
2 A USB drive is an example of recording media. ( )
3 Once false information spreads online, it can easily be deleted. ( )
4 You must infringe others' privacy. ( )
5 Be respectful online and consider others when sharing information. ( )

3 Match between column (A) and column (B):

Column (A)	Column (B)
1 Data	a. Information remains and doesn't disappear easily
2 Geotagging	b. comparing obtained information with other sources to check its accuracy and reliability
3 Social media	c. Raw facts and figures such as temperature readings
4 Cross-checking	d. platforms where individuals can connect with each other on the internet
5 Persistence	e. Information that includes location embedded in photos or video

1 ..... 2 ..... 3 ..... 4 ..... 5 .....

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Model Exams on Chapter 1

Model Exam 1

1 Choose the correct answer:

1. The representation of facts using numbers, characters, or symbols is called ..... .
   a. information b. knowledge c. data d. media
2. Which of the following represents knowledge?
   a. Temperature and humidity values
   b. Analysis results over 10 years
   c. Weather forecast d. All of them
3. Which of the following is not a characteristic of information?
   a. It has a form like an object.
   b. The meaning changes with the recipient.
   c. It has persistence. d. It has propagation.
4. If someone buy a music CD and distributes copies to his friends, this refers to ..... .
   a. propagation b. reproducibility
   c. persistence d. none of them
5. Rumors and false information that remain online for a long time refer to the ..... of information.
   a. propagation b. reproducibility
   c. persistence d. none of them

2 Put (T) or (F):

1. Data, information, and knowledge all mean the same thing. ( )
2. Information has characteristics such as persistence and propagation. ( )
3. The meaning of information never changes depending on the recipient. ( )

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موقع الدكتور محمد رزق
Dr.MoRizK